

Density Problems

	Not Yet	Almost	Got it!
#1—Level 1-I can write the formula for density.			
#2—Level 2-I can find the volume of any substance.			
#3—Level 2-I can find the mass of any substance.			
#4—Level 3—I can calculate the density of any substance.			

Show your work! Use a calculator.

1) What is the formula for density?

2) Mercury metal is poured into a graduated cylinder that holds exactly 22.5 mL. The mercury used to fill the cylinder has a mass of 410 g in a cup that is 104g. From this information, calculate the density of mercury.

3) A block of aluminum has dimensions of 1 cm x 3 cm x 5 cm and has a mass of 40.5 g. What is its density? ($V = l \times w \times h$)

4) Calculate the density of sulfuric acid if 35.0 mL of the acid has a mass of 75 g in a cup that has a mass of 5 g.

5) A block of lead has dimensions of 4 cm by 5 cm by 6cm. The block weighs 1587 g. From this information, calculate the density of lead. ($V = l \times w \times h$)

6) 28 g of iron shot is added to a graduated cylinder containing 46 mL of water. The water level rises to the 50 mL mark, from this information, calculate the density of iron.

7) A flask that weighs 345 g is filled with 225 mL of carbon tetrachloride. The mass of the flask and carbon tetrachloride is found to be 705 g. From this information, calculate the density of carbon tetrachloride.